

Claim 7, line 3, delete "said", second occurrence, and insert therefor  
... side ...

### REMARKS

This amendment is responsive to the Office Action dated September 15, 2000 pursuant to which claim 7 has been objected to; claims 1-16 stand rejected under 35 USC 112, second paragraph; all of the claims stand rejected under 35 USC 103(a); and, the prior rejection of claims 4, 5, 15 and 16 under the second paragraph of 35 USC 112 stands withdrawn.

Per this amendment, claim 7 has been corrected following the helpful suggestions of the Examiner, the courtesies of which are gratefully acknowledged and independent claims 1 and 6 have been modified to provide proper antecedent basis for the recitation of the longitudinal and transverse axes. Claims 1 and 6 have also been modified to recite the aerodynamic and hydrodynamic characteristics of the complex articles which further distinguishes applicant's claimed invention from the cited and applied references.

Support for the newly entered aerodynamic and hydrodynamic recitations can be found throughout the specification. See, for example, page 1 lines 16-32.

US Patent 5,824,255 to Ross, et. al. along with US Patent 5,913,766 to Reed, et. al and US Patent 5,119,535 to Gnagy, et.al. have been relied upon to support the 35 USC 103(a) rejection of the claims.

This rejection is respectfully traversed and its reconsideration is respectfully solicited.

The patent to Ross, et.al. discloses a method and apparatus for forming and shaping a honeycomb core material. The method *requires* heating the honeycomb core material to its proper forming temperature prior to imparting a form or shape to it (Col. 7, ll. 42-52). That the Ross, et. al, method uses heat has also been noted in the Office Action. Despite this, it is urged in the Office Action that deforming the honeycomb core material of Ross, et. al. at ambient temperature would be within the purview of one skilled in the art.

It is respectfully submitted that the teaching of deforming a honeycomb core material at ambient temperature comes from applicant's disclosure, not the references and particularly not from the Ross, et.al patent

disclosure. How much heat is needed to accomplish deformation or the impartation of a desired shape is submitted to be immaterial. To "heat" means exactly that; i.e., to raise the temperature of an article *above* ambient temperature. Any other attempted interpretation would be tantamount to a distortion of accepted scientific understanding of the term "heat".

Furthermore, there is no disclosure or suggestion in the Ross, et. al. patent that the honeycomb material, even after being deformed or shaped, is capable of responding to aerodynamic and hydrodynamic movement as is now set forth in applicant's claimed invention.

The patent to Reed, et. al. discloses an apparatus and method for crushing at least a part of a honeycomb panel (Col. 2, ll. 18-27). Crushing may indeed be the ultimate form of deformation and shaping, but it destroys the integrity of the honeycomb core material and alters its physical properties so that it is no longer useful as a honeycomb core material. It is further submitted that a honeycomb core material crushed in accordance with the Reed, et.al. method would not be capable of responding to aerodynamic and hydrodynamic movement as is presently set forth in applicant's claims.

It is respectfully submitted that the patent to Reed, et. al. does not cure any of the deficiencies noted above with respect to the Ross, et. al. patent and it is further respectfully submitted that the teaching of the Reed, et.al. patent has no relevance to either the Ross, et. al. patent or to applicant's claimed invention.

The patent to Gnagy, et.al. discloses a honeycomb structure that is first heated in a fluidized bed and then subjected to pressure to form it into a desired shape prior to removing the honeycomb structure from the fluidized bed and allowing it to cool (Col. 8, ll. 55-67). Mixtures of alloys, sand and eutectic salts are used for the fluidized beds (Col. 9, ll. 3-17) and the temperatures used in the fluidized bed to heat the honeycomb structure range from 400 to 600 degrees F (Col. 10, ll. 28-36). The formed shapes obtained have essentially long or short radii of curvature (Col. 12, ll. 2-8 and Figs. 15 and 16) and are achieved by employing relatively complex molding apparatus such as those shown in Figs. 5-8, described at Col. 9, l. 35 - Col. 10, l. 27; Figs. 17-19, described at Col. 12, l. 44 - Col. 13, l. 19; and Fig. 34, described at Col. 16, ll. 7-24.

By contrast, in applicant's claimed method, the honeycomb core is deformed at ambient temperature which is significantly less than that used in Gnagy, et.al. method. Further, applicant's claimed method does not use a fluidized bed nor complex apparatus. In addition, the contoured, complex shapes achieved by applicant's claimed method which include convex or

concave or both convex and concave surfaces can not be equated with the long or short radii forms of the Gnagy, et.al. formed honeycomb structure. Finally, applicant's complex shaped articles are responsive to aerodynamic and hydrodynamic movement which is not disclosed or suggested in the Gnagy, et. al. patent.

Thus, it is respectfully submitted that the Gnagy, et. al. patent does not cure any of the deficiencies noted above with regard to either the Ross, et. al. patent and/or the Reed, et. al. patent.

In further support of the 35 USC 103(a) rejection of claims, US Patent 5,514,017 to Chimiak has been combined with the patents to Ross, et. al, Reed, et. al. and Gnagy, et.al.

This rejection is also respectfully traversed and its reconsideration is respectfully solicited.

The patent to Chimiak discloses a coated, honeycomb core aquatic surfboard having an elliptical shape and which is provided with a fin on its underside.

There is no disclosure or suggestion in the Chimiak patent of honeycomb cores having complex, contoured shapes nor of a method of making them all as recited in applicant's claims. Furthermore, applicant's claimed articles are not limited to aquatic surf boards, but include articles having complex contoured shapes where either one or both surfaces can be convex, concave or combinations thereof and which are responsive to aerodynamic and hydrodynamic movement. Consequently, it is submitted that the Chimiak does not cure any of the deficiencies noted above with respect to the Ross, et.al., Reed, et. al. or Gnagy, et.al. patents.


It appears that the patent to Chimiak is relied upon primarily to support the rejection of applicant's dependent claims 2 and 9-12. However, it is respectfully submitted that with a finding of allowability of applicant's independent claims 1 and 6, applicant's dependent claims should also be found to be allowable as the dependent claims define preferred embodiments and of applicant's invention and further limit the scope of the claims.

In view of the present amendment and in light of the foregoing remarks, it is respectfully submitted that the objections and rejections of record have been overcome and that applicant's presently claimed invention defines subject matter that is clearly and patentably distinguishable from the cited and applied references whether considered singly or in combination. Entry of this amendment, favorable reconsideration of this case and passing the claims herein to an early issue are, therefor, respectfully solicited.

Applicant requests a three (3) month extension of time. A check for \$445.00 is enclosed.

Charge any additional fees to Deposit Account No. 06-0515.

Respectfully submitted,

  
Stephen E. Feldman  
Registration No. 22,473

STEPHEN E. FELDMAN, P.C.  
Attorneys for Applicant  
12 East 41st Street  
New York, New York 10017  
(212) 532-8585

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